Western Sydney University Bankstown City Campus Development – Flood Emergency Response Plan

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Contents

1. Introduction

This Flood Emergency Response Plan has been developed as the requirement from the Office of Environment and Heritage (OEH) to promote a satisfactory awareness of expected flood behaviour and risks, identify measures to become flood prepared and recommend a course of action during and after flood events. This report has been prepared to fulfil the flooding requirements from the Office of Environment and Heritage (OEH), specifically No. 18 h to j.

2. Flooding

The site is located at 74 Rickard Road Bankstown within the Salt Pan Creek Catchment which is a tributary of Georges River in Sydney's south. The site includes 74 Rickard Road (being Lot 5 DP 777510) and a portion of 375 Chapel Street (being part Lot 6 DP 777510), in addition public domain works are proposing to Rickard Road, 70 Rickard Road (being part Lot 7 DP777510) and access is proposed via 80 Rickard Road (being Lot 12 DP566924). The catchment is approximately 26km2 and the site is subject to overland flooding in the 100 year ARI event. The hydraulic model using TUFLOW has been prepared with hydrographs provided by Canterbury Bankstown Council as an input parameter. The results indicate that the majority of the site is at risk of flooding in the critical duration of 100 year ARI design storm event and PMF. The estimated 100 year and PMF flood at the upstream of the proposed building are approximately 25.2m and 25.8m respectively. Refer to Civil Design Report for details.

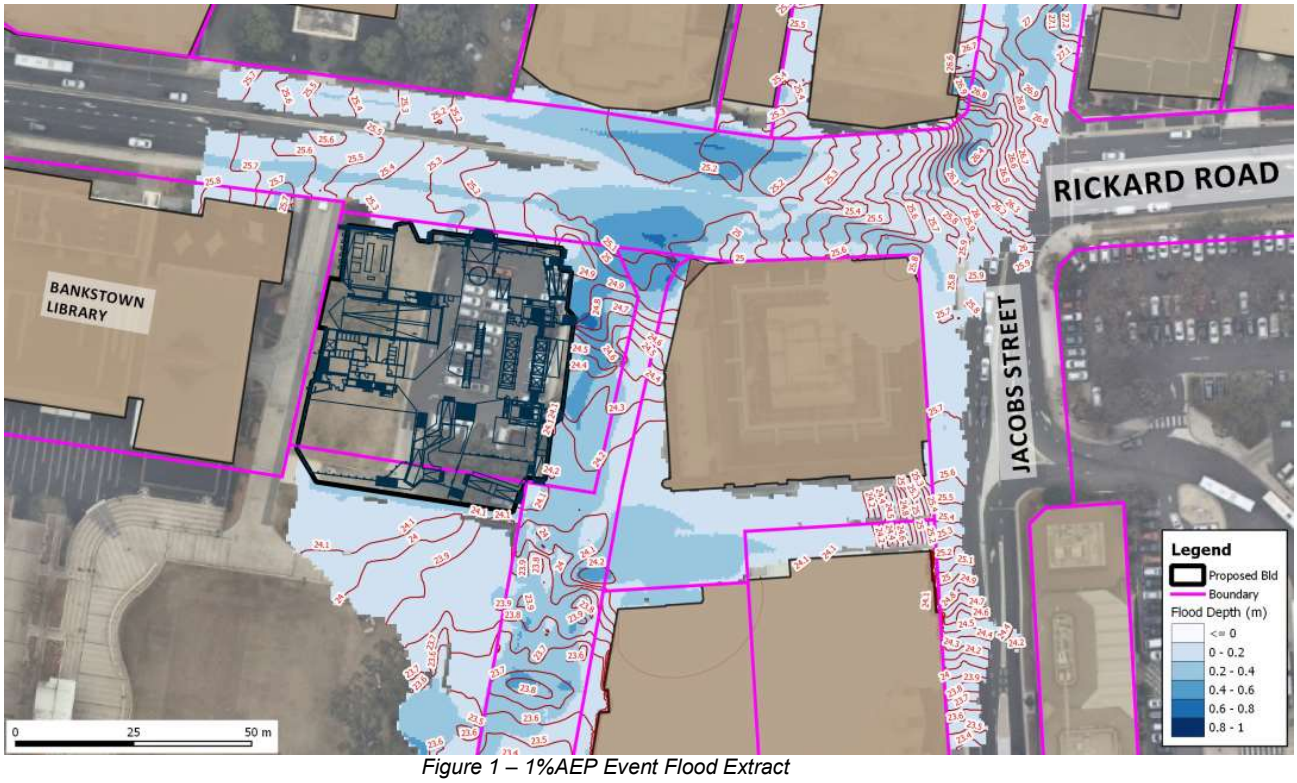

Figure 1 – 1%AEP Event Flood Extract

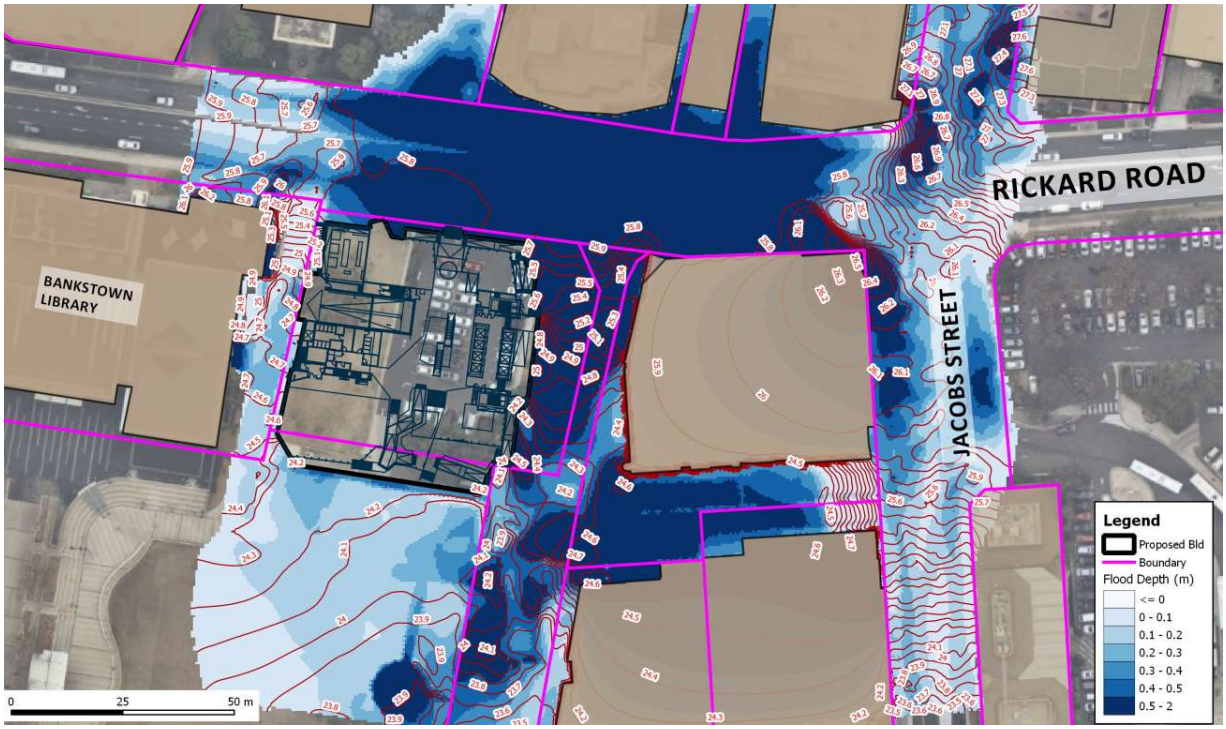

Figure 2 – PMF Event Flood Extract

3. Flood and Evacuation Warnings

A network of rainfall gauge stations is maintained by Bureau of Meteorology (BOM). These provide information to the BOM as one source of information informing their flood warning system. The BOM should issue one of five types of warnings through local radio, television and their website – http://www.bom.gov.au. In addition, the State Emergency Service (SES) may issue a flood bulletin, evacuation waring or evacuation order. The different warning types are as below.

3.1 Severe Weather Warning

Severe weather warnings are issued by the BOM for potentially dangerous weather conditions. A description of the threat will be included in the warning along with the time for next issue. It is noted that a severe weather warning does not imply that flooding will eventuate. Warnings are generally updated every six hours or as the event dictates.

3.2 Severe Thunderstorm Warning

A severe thunderstorm warning will be issued if there is strong evidence that a severe thunderstorm will develop or if a severe thunderstorm is reported. Flash flooding may occur during severe thunderstorms. Warnings are generally updated every three hours or shorter as required.

3.3 Flood Alert

A flood alert will be issued if flood producing rain is expected. This provides an early warning that flooding may occur.

3.4 Generalised Flood Warning

A generalised flood warning is to be issued when flooding is expected to occur in a given area. Three hours warning time is expected from issue of warning to peak flood level as per the “Service Level Specification for Flood Forecasting and Warning Services for New South Wales – Version 2.0” (BOM, 2013).

This is the most likely warning type for the subject site should evacuation need to occur.

3.5 Minor/Moderate/Severe Flood Warning

A more detailed flood warning may be issued based on any additional information available. Three hours warning time is expected from issue of warning to peak flood level.
Real time river and harbour height data is available from the BOM website.
(http://www.bom.gov.au/nsw/flood/)

3.6 SES Flood Bulletins

The SES may issue a flood bulletin providing information of the likely flood consequences and recommended actions.

3.7 Evacuation Warning

The SES may issue an evacuation warning allows time to prepare for evacuation.

3.8 Evacuation Order

The SES will issue an Evacuation Order if evacuation is required. If this occurs, evacuation must be undertaken. Broadcast will be through radio/TV, automated telephone message or SMS.

4. Assembly Point and Evacuation Routes

4.1 During Construction

The existing carpark at the intersection of Rickard Road and Jacobs Street at the eastern side of the subject site has been nominated as the emergency assembly point and nominated refuge point. This location with level of approximately 27.5m AHD is above the PMF levels of 25.8m and 27m at the upstream of proposed building (i.e. 74 Rickard Road) and the intersection of Rickard Road and Jacobs Street and provide safe refuge until the flood event has passed. The locations of emergency assembly point and nominated refuge point and evacuation route are shown in Figure 3 below.

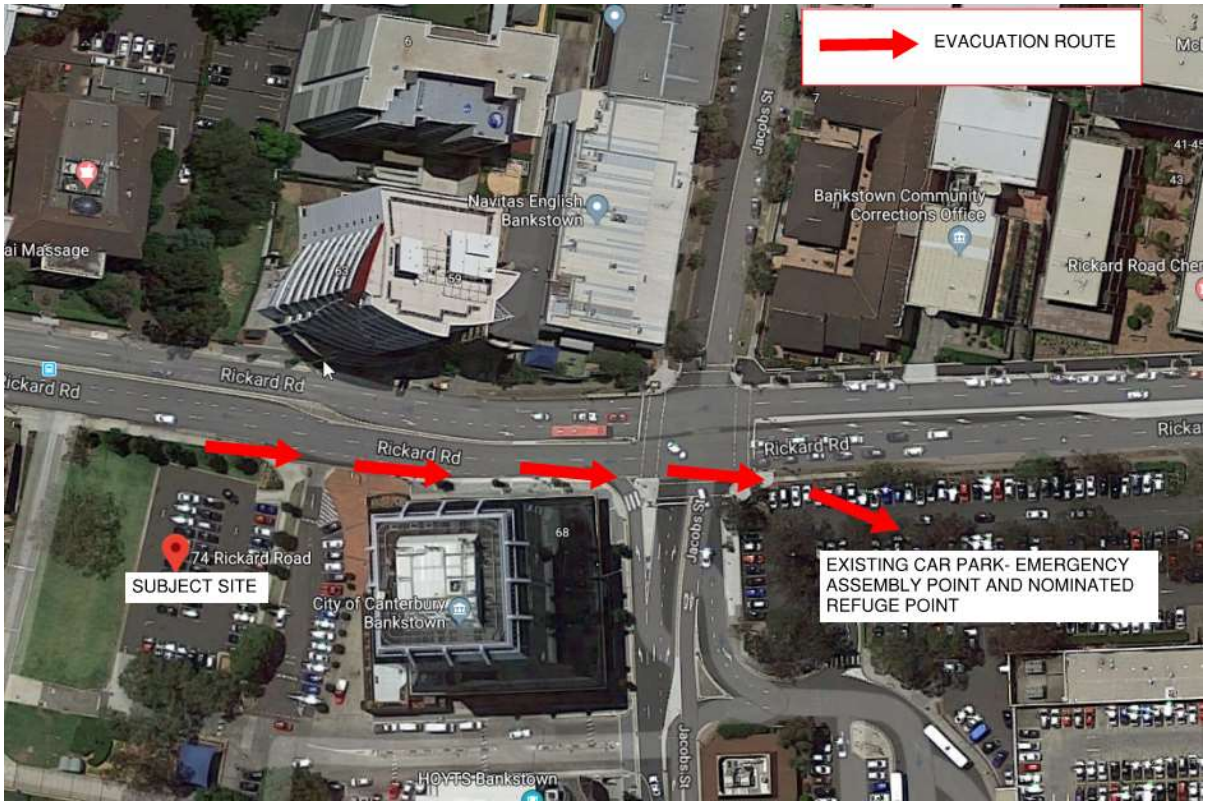

Figure 3 – Evacuation Route during Construction

4.2 During Operation

The floor level at first level of the proposed University building is at 30.56m AHD which is above the PMF level of 25.8m at the upstream of the proposed building. On-site refuge (i.e. first level or above) is recommended for this site during operation of the University.

5. Flood Response Preparation

5.1 Evacuation Drills

Evacuation drills are designed to increase flood awareness within the site population. These drills are to be undertaken twice yearly to familiarise the employees and contractors of the procedures when responding to a flood event. It is an opportunity to outline flood levels and the dangers of entering flood water.

6. Conclusion

As the majority of the site is at risk of flooding under the 100-year ARI design storm event and PMF, it is recommended to evacuate offsite to nominated refuge points during construction in the event of a major flood. On-site refuge is only recommended for this site during operation of the University.
This report should be revised if the flood study for the subject site is revised to capture changes in the catchment since the last study.